MINIMUM PRESSURE REQUIREMENTS
(FORMALLY POTABLE TRANSFER LINES)

Rule Affected: Title 30 Texas Administrative Code (30 TAC) §290.44(d)

Background

Section §290.44(d) in the current TCEQ's Rules and Regulations for Public Water Systems relates to the operational requirement that minimum pressures within a public water system (PWS) be maintained at 35 pounds per square inch (psi). An exception to this requirement may be requested by a PWS and will be evaluated on a case-by-case basis. In order to evaluate this type of exception request, the following definitions and guidance have been established:

Definitions

1. A **potable water distribution line** is a type of potable water main (defined per 30 TAC §290.38(65)) that directly conveys finished water (defined per 30 TAC §290.103(19)), which is under pressure from a pump station, clearwell, ground storage tank or elevated storage tank leading to a connection (defined per 30 TAC §290.38(16)). A potable water distribution line is subject to all applicable provisions of 30 TAC Chapter 290 Subchapter D.
2. A **water transmission line** can be classified as either a potable water transmission line or a raw water transmission line. A water transmission line cannot directly convey water to a connection or a potable water distribution line.
3. A **potable water transmission line** is a type of potable water main (defined per 30 TAC §290.38(65)) that directly conveys finished water (defined per 30 TAC 290.103(19)), which is under pressure from a pump station, standpipe or elevated storage tank located at a water production or water treatment facility under the control of a PWS to an off-site pump station, ground storage tank or elevated storage tank. A potable water transmission line is subject to all applicable provisions of 30 TAC Chapter 290 Subchapter D.
4. A **raw water transmission line** is a type of water main not defined by 30 TAC §290.38(65), but is owned or operated by a PWS which directly conveys raw water (defined per 30 TAC §290.103(33)) under pressure from a water source. Water sources may include a well, wellfield, surface water, or any tank or structure that is used to store raw water, to a location for treatment required so that the untreated water complies with drinking water standards as defined by 30 TAC §290.38(24). A raw water transmission line is subject to the applicable provisions of 30 TAC §290.39.

Guidance

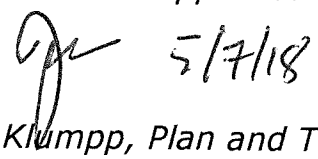
To be considered for an exception under this staff guidance, the PWS is required to demonstrate to the TCEQ's satisfaction that the water transmission line has been designed to maintain a minimum internal pressure of 5 pounds per square inch gauge

(psig) above any external hydrostatic pressure. This includes but is not limited to any combination of expected maximum seasonal groundwater elevation and ponded surface water elevation.

At the time of plan submittal, the design engineer is to provide documentation, as outlined below, supporting operation of the water transmission line at a pressure that is less than 35 psi.

1. Provide a map showing the route of the proposed transmission line. The map is to be of sufficient detail to show locations where the water line will cross, or be in proximity to:
    a. permanent water bodies that are known or suspected to influence the elevation of the groundwater at the pipe location;
    b. flood plains;
    c. natural or man-made wetlands;
    d. hydric soils;
    e. areas of short-term localized ponding resulting from either natural topography or area land development;
    f. street or railroad crossings; and,
    g. any locations where the groundwater is known, or suspected to be impacted, by subsurface releases of hazardous chemicals, petroleum products, or microbial contamination.
2. For each pipe segment as shown on the map, provide the:
    a. trench depth;
    b. pipe diameter;
    c. minimum operating pressure of transmission line; and,
    d. seasonal height of ground water and depth of ponded water. Provide source of information for provided seasonal high groundwater depth, ponded water depth, and soil types.
3. Submit a pressure study to support provided operating pressures. For segments that may be impacted by contaminated groundwater, include the type of contamination, contaminant source if known, and if the contaminated groundwater is or has been the subject of remediation activity. Discuss the means in which pressure will be maintained in the line segment in periods of no flow.
4. If the means to maintain the pressure in the transmission line requires the use of electrical powered equipment, discuss electrical reliability including length of power outages that would affect the ability of electrical powered equipment to operate reliably and means to address maintaining pressure in the transmission during power outages.
5. Discuss the standard operating procedure to be employed to assure that the required minimum pressure is maintained in each pipe segment. This standard operating procedure will be subject to review when requested by TCEQ staff.

Finalized and Approved by:



Joel Klumpp, Plan and Technical Review Section Manager, 05/07/2018

If no formal expiration date has been established for this staff guidance, it will remain in effect until superseded or canceled.

Revision History:

Date	Action	Action by
4/1/2004	Approved	Buck Henderson
12/12/2012	Approved	Ada Lichaa
01/22/2015	Approved	Joel Klumpp
01/09/2018	Revised	Bill Melville/Alvie Nichols
05/07/2018	Approved	Joel Klumpp